Form (H)
Short course description

Course title: Multivariate Statistical Methods	Course number and code: STAT 438
Previous course requirement: STAT 339	Language of the course: Arabic
Course level: 7/ Year 4	Effective hours: 3(2+0+2)

Course description

Matrix algebra and Random Vector- The multivariate normal distribution -Inferences about a Mean vector- Hotelling's T and comparisons of several multivariate Means – MANOVA (One and two way) - Principle components -Discrimination and classification- clustering method Application using computer packages (SAS-SAS/IML - SPSS - Minitab)

Course objectives

• Learn Statistical techniques
• Understanding the concept of Multivariate Statistical Methods in bulk of the data to explanation of social or physical phenomenon.
• Understanding how to select the best methods to analysis data and using statistical packages as SAS and do prediction
writing the statistical reports
• Learn Statistical techniques

Learning outcomes (understanding, knowledge, and intellectual and scientific skills)
After studying this course, the student is expected to be able to:

• Understand and describe the relationships between many variables
• More mathematics required to derive multivariate statistical techniques for making inferences
• The choice of methods and the type of analysis employed are largely determined by the objectives of the investigation
• Understand ,study and analysis problems that are arising in the physical, social, and medical sciences
Using statistical packages as SAS

Textbook adopted and supporting references

Title of the book	Author's name	Publisher's name	Date of publication
التحليل الإحصائي متعدد المتغيرات- باستخدام حزم ساس	أ. د. هشام مصطفى النشواتي، أ. د. خلف سلمان سلطان، أ. د. عبد الحميد عبد الله الزيد	جامعة الملك سعود	2017
Applied multivariate statistical analysis	, Richard A. Johnson Dean W. Wichern	Pearson Education International	2002